

REPLACED BY  
ART 34 AND 35

# CLAIMS

1. A self-cooling beverage package device having  
a first cavity (10) containing a beverage for  
consumption, a second cavity (20) forming a heat  
exchanger and containing a refrigerant liquid and its  
vapour, a third cavity (30) containing adsorbent (31)  
for pumping of said vapour and means (50) of putting  
said second cavity into communication with said third  
cavity for operation of the device, characterised in  
that the third cavity (30) has an external thermal  
insulation layer (35) designed such that the heat flow  
from the adsorbent through the outside wall of the  
third cavity (30) is larger or equal to the heat flow  
from the adsorbent to the second (20) and first (10)  
cavities during operation of the device.

2. A self-cooling beverage package according to  
Claim 1, characterised in that the temperature of the  
external surface of the insulation layer (35) rises to  
more than 70°C during operation of the device.

3. A self-cooling beverage package according to  
one of Claims 1 to 2, characterised in that the thermal  
insulation layer (35) has a thermal conductance less  
than or equal to 500 W.m<sup>-2</sup>.K<sup>-1</sup>.

4. A self-cooling beverage package according to  
Claim 3, characterised in that the thermal conductance  
of the insulating layer is between 20 and 60 W.m<sup>-2</sup>.K<sup>-1</sup>.

5. A self-cooling beverage package according to  
one of the preceding claims, characterised in that the

thermal insulation layer (35) has a thickness between 0.5 and 1.5 mm.

5       6. A self-cooling beverage package according to one of the preceding claims, characterised in that the thermal insulation layer (35) has a variable thickness.

7. A self-cooling beverage package according to Claim 1, characterised in that the thermal insulation layer (35) includes a material melting at a temperature between 40°C and 80°C.

10       8. A self-cooling beverage package according to Claim 7, characterised in that the thermal insulation layer consists of at least two layers, one of them including the melting material.

15       9. A self-cooling beverage package according to one of the claims 7 to 8, characterised in that the thermal insulation layer (35) has a thickness between 3 and 10 mm.

20       10. A self-cooling beverage package according to one of Claims 1 to 9, characterised in that the thermal insulation layer (35) surrounds the third cavity (30) consisting of a metal container.

25       11. A self-cooling beverage package according to one of Claims 1 to 9, characterised in that the thermal insulation layer (35) is constituted by the walls of a container forming the third cavity (30).

12. A self-cooling beverage package according to one of Claims 1 to 10, characterised in that the thermal insulation layer (35) extends around the first cavity (10).

13. A self-cooling beverage package according to one of the preceding claims, characterised in that the thermal insulation layer (35) has a thermochromic label (36).

5        14. A self-cooling beverage package according to Claim 13, characterised in that the thermochromic label (36) is disposed opposite the third cavity (30).

10       15. A self-cooling beverage package according to Claim 13, characterised in that the thermochromic label (36) is disposed opposite the first cavity (10).

16. A self-cooling beverage package according to one of the preceding claims, characterised in that the thermal insulation layer (35) consists of cardboard and/or paper and/or plastic.